

**EFFECTS OF TWO DIFFERENT HERBICIDES  
ON POPULATION OF SOIL BACTERIAS**

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**Final Year Project Report Submitted in  
Partial Fulfilment of the Requirements for the  
Degree of Bachelor of Science (Hons.) Plantation Management and Technology  
in the Faculty of Plantation and Agrotechnology  
Universiti Teknologi MARA**

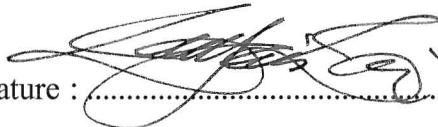
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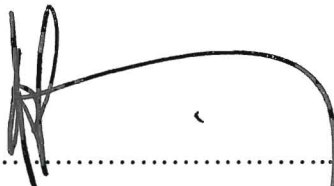
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I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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## **ABSTRACT**

This study is carried out to assess and compare the effects of two different herbicides on the population of soil bacteria. Two herbicides used in this study are ECOMAX (a.i.: glyphosate-isopropylammonium) and GARLON 250 (a.i.: triclopyr butotyl) were applied according to the factorial experimental design with four (4) different concentrations. The treatments applied on the isolated soil samples, left in the natural environment. The application of two herbicides have no significant different in the population of soil bacteria. However, significant differences were observed among the different concentration (2 ml/kg, 4 ml/kg, 6 ml/kg, and 8 ml/kg) of the herbicides used in this study. Fluctuation in the number of population of the soil bacteria may be caused by the dynamic interaction of prey-and-predator between the species of bacteria. It is also due to the utilization of the chemical compound as the substrate for life process. As the conclusion, both chemical herbicides did not negatively affect the bacteria populations.